

**ABSTRACT**

A radio-parameter control method allowing fine radio-parameter setting to improve communication quality is disclosed. Fixed stations are distributed at predetermined locations in a service area. A fixed station monitors reception condition of a pilot channel signal and transmits the monitored condition data back to a corresponding base station. A radio network control station statistically analyzes the monitored condition for each fixed station and estimates a future location of a mobile station. Radio parameters for use in radio communication between the mobile station and a base station corresponding to the future location of the mobile station are controlled based on statistical condition data at the future location of the mobile station.